

WHAT IS CLAIMED IS:

1. A method for automatically classifying images into events for composing and authoring of a multimedia image program on a recordable optical disc, the method comprising the steps of:

- (a) receiving a plurality of images having either or both date and/or time of image capture;
- (b) determining one or more largest time differences of the plurality of images based on clustering of the images;
- (c) separating the plurality of images into events based on having one or more boundaries between events which one or more boundaries correspond to the one or more largest time differences;
- (d) specifying at least one multimedia feature that is related to each event;
- (e) encoding the images between event boundaries and the at least one multimedia feature associated therewith into an event bitstream; and
- (f) writing each event bitstream to the recordable optical disc, whereby each event is authored into a separate section of the recordable optical disc.

2. The method as in claim 1, wherein step (b) includes computing a time difference histogram and performing a 2-means clustering on the time difference histogram for defining the one or more boundaries.

3. The method as in claim 2, wherein step (b) further includes mapping the time difference histogram through a time difference scaling function before performing the 2-means clustering.

4. The method as in claim 2, wherein step (c) includes checking the images adjacent the one or more boundaries for similarity by comparing content of the images.

5. The method as in claim 4, wherein step (c) includes checking the images adjacent the one or more boundaries for similarity by using a block-based histogram correlation technique.

6. The method as in claim 5 wherein following step (c) the events are divided into subject grouping by using an image content analysis.

7. The method as in claim 6, wherein following step (c) the events are divided into subject grouping by using a block-based histogram correlation technique.

8. The method as in claim 7, further including comparing two of the images by shifting one of the images in a desired direction based on an intersection value and then computing the block based correlation.

9. The method as in claim 8, further including forming a map that contains two best intersection values of each of the block comparisons; dividing the map into three portions; and then comparing center portions for similarity.

10. The method as claimed in claim 1 wherein the recordable optical disc is a VCD or a DVD.

11. The method as claimed in claim 1 wherein the multimedia feature includes an music audio clip.

12. The method as claimed in claim 1 wherein the multimedia feature includes an voice audio clip.

13. The method as claimed in claim 1 wherein the multimedia feature includes text annotations.

14. The method as claimed in claim 1 wherein the multimedia feature includes rotation of one or more of the images.

15. The method as claimed in claim 1 wherein the multimedia feature includes zooming of one or more of the images.

16. The method as claimed in claim 1 wherein the multimedia feature includes a transition or a special effect applied to one or more of the images.

17. A method for automatically classifying images into events for composing and authoring of a multimedia image program on a recordable optical disc, the method comprising the steps of:

- (a) receiving a plurality of images arranged in chronological order;
- (b) dividing the images into a plurality of blocks;
- (c) grouping the images into events based on block-based histogram correlation which includes computing a color histogram of each block and computing a histogram intersection value which determines the similarity between blocks;
- (d) specifying at least one multimedia feature that is related to each event;
- (e) encoding the images comprising an event and the at least one multimedia feature associated therewith into an event bitstream; and
- (f) writing each event bitstream to the recordable optical disc, whereby each event is authored into a separate section of the recordable optical disc.

18. The method as in claim 17, wherein step (c) includes comparisons of two of the images by shifting one of the images in a desired direction based on the intersection value and then computing the block based correlation.

19. The method as in claim 18, wherein step (c) includes forming a map that contains two best intersection values of each of the block comparisons; dividing the map into three portions; and then comparing center portions for similarity.

20. The method as claimed in claim 17 wherein the recordable optical disc is a VCD or a DVD.

21. The method as claimed in claim 17 wherein the multimedia feature includes an music audio clip.

22. The method as claimed in claim 17 wherein the multimedia feature includes an voice audio clip.

23. The method as claimed in claim 17 wherein the multimedia feature includes text annotations.

24. The method as claimed in claim 17 wherein the multimedia feature includes rotation of one or more of the images.

25. The method as claimed in claim 17 wherein the multimedia feature includes zooming of one or more of the images.

26. The method as claimed in claim 17 wherein the multimedia feature includes a transition or a special effect applied to one or more of the images.